Hour.	Moon's Right Ascension.		Moon's Declination.		Damoiseau's Moon's Eq. Par.	Damoiseau's Semidiameter.
	° ′ ″	′ ″	° ′ ″	′ ″	′ ″	′ ″
5	61 14 5.22	31 9.53	21 0 48.77	8 28.01	54 33.58	14 52.49
6	61 45 14.75	31 12.26	9 16.78	8 22.06	32.82	52.28
7	62 16 27.01	31 14.98	17 38.84	8 16.06	32.07	52.07
8	62 47 41.99	31 17.62	25 54.90	8 10.01	31.32	51.87
9	63 18 59.61	31 20.32	34 4.91	8 3.92	30.58	51.67
10	63 50 19.93	31 23.01	42 8.83	7 57.81	29.86	51.47
11	64 21 42.94	31 25.68	50 6.64	7 51.67	29.16	51.28
12	64 53 8.62		21 57 58.31		54 28.51	14 51.10

Three hundred and ninety-seventh meeting.

March 28, 1854. — SEMI-MONTHLY MEETING.

The VICE-PRESIDENT, and afterwards the PRESIDENT, in the chair.

The Corresponding Secretary read a letter from the Trustees of the Astor Library, acknowledging the reception of Vol. V. Part I. of the Academy's Memoirs, and Vols. II. and III. (as far as published) of the Proceedings; also a letter from Rev. Charles Brooks on the Weather Law.

Professor Lovering exhibited a bioscope; an optical instrument for giving the motions of life to pictures, and illustrating the great advancement of optical science. This instrument combines the three important modern discoveries of the daguerreotype, the stereoscope, and the phenakistiscope. The daguerreotype gives a perfect picture, without solidity or motion; the stereoscope suggests the idea of solidity without motion; the phenakistiscope imparts life by motion. The bioscope obtains perfect figures from the daguerreotype. By a stereoscopic arrangement of mirrors adapted to both eyes, the figures acquire solidity; and by the revolution of the phenakistiscope, the figures exhibit the motions of life. It requires some practice to see all that the instrument is capable of showing; and the combination admits of considerable improvement.

Professor W. B. Rogers made a communication on the natural coke found in the vicinity of Richmond, Virginia. This

coke is almost entirely free from volatile or bituminous matters, being less puffy than ordinary coke, but less compact than anthracite. In the vicinity of the coal-seams are dikes of trap-rock. One hundred and twenty feet below the surface there is a bed of trap-rock, twenty-five feet in thickness; below this is a clay-slate, almost vitrified, commonly called "basalt," which has assumed a columnar crystallization; below this are alternating beds of sandstones and slates. Then, at the depth of sixty feet below the trap, there are ten or twelve feet of this coke, having occasional traces of vegetable remains, and at the bottom of the bed having a small amount of bituminous matter. Twenty feet below this is a half-coky coal, and fifteen feet below this, the ordinary bituminous coal of the country. These strata plainly indicate the graduation and diminution of the heating action in a downward direction. It is very curious, that in the beds of carboniferous slate above the trap there is no indication of this metamorphic action; there are even seams of coal above it; the veins of injected material must have been thrown up from beneath, the heating action extending from the interposed trap in a downward direction. This series of strata is therefore interesting, as proving that there were periods of igneous activity during the deposition of these formations.

Three hundred and ninety-eighth meeting.

April 11, 1854. — SEMI-MONTHLY MEETING.

The PRESIDENT in the chair.

Professor Lovering exhibited a model of an instrument for producing great velocities in experimental physics, particularly in optics. The motion is produced by a spring acting upon a train of wheels, and may be very suddenly diminished or increased by friction. With it were performed several experiments by the rapid revolution of variously painted cards; as of mixing the prismatic colors, and any two complementary tints or colors to form white. The instrument is of practical